

Amendments to the Claims:

1-37 (canceled).

38. (Currently Amended) A valve comprising:

a valve body having a valve cavity therein;

a valve element for controlling flow through the valve based on a rotational position of the valve element about an axis, and

a single piece packing that surrounds said valve element and seals directly against said valve element within said valve cavity; wherein said valve element comprises a ball and adjacent upper and lower cylindrical trunnions extending from the ball; said lower cylindrical trunnion extending axially past a lower end of said packing; said valve cavity being dimensioned to closely receive said valve element ~~while permitting said valve element to axially shift to compensate for temperature effects on said packing.~~

39. (Previously Presented) The valve of claim 38 wherein the packing is dimensioned to be installed on said valve element within a room temperature range.

40. (Previously Presented) The valve of claim 39 wherein said room temperature range is about 65-100 °F.

41. (Previously Presented) The valve of claim 39 wherein said packing has a generally cylindrical outer surface defined by a height H and an outer diameter D4, said packing having a ratio H/D4 of about 0.75 to about 0.85.

42. (Previously Presented) The valve of claim 41 wherein said ratio H/D4 is about 0.8.

43. (Previously Presented) The valve of claim 38 wherein said ball has an outer diameter D1 and at least one of said trunnions having an outer diameter D3; wherein said valve element has a ratio D3/D1 of about 0.7 to about 0.9.

44. (Previously Presented) The valve of claim 43 wherein said ratio D3/D1 is about 0.8.

45. (Previously Presented) The valve of claim 39 wherein said packing has a generally cylindrical outer surface defined by a height H and an outer diameter D4, said packing having a ratio H/D4 of about 0.75 to about 0.85; and wherein said ball has an outer diameter D1 and at least one of said trunnions having an outer diameter D3; wherein said valve element has a ratio D3/D1 of about 0.7 to about 0.9.

46. (Previously Presented) The valve of claim 45 wherein said ratio H/D4 is about 0.8 and said ratio D3/D1 is about 0.8.

47. (Previously Presented) The valve of claim 38 wherein said packing comprises a polymer.

48. (Previously Presented) The valve of claim 47 wherein said polymer is selected from the group comprising polytetrafluoroethylene (PTFE), polyethylene, polyetheretherketone (PEEK) and fluorinated ethylene propylene.

49. (Previously Presented) The valve of claim 38 wherein said valve element comprises a non-spherical flow control element.

50. (Previously Presented) The valve of claim 39 wherein said packing has an inner surface that forms an interference fit with said valve element when said packing is installed thereon prior to loading said packing within said valve body.

51. (Previously Presented) The valve element of claim 39 wherein said packing has an interference fit with said valve cavity when said packing is installed on said valve element and inserted into said valve cavity prior to loading said packing within said valve cavity.

52. (Previously Presented) The valve of claim 38 wherein said packing comprises a polymer that is selected from the group consisting of: PFA, filled PFA, polytetrafluoroethylene (PTFE), filled PTFE, polyethylene, polyetheretherketone (PEEK) and fluorinated ethylene propylene.

53. (Previously Presented) The valve of claim 38 wherein said packing is dimensioned to be installed on said valve element at a temperature below which said packing deforms.

54. (Previously Presented) The valve of claim 53 wherein said temperature is room temperature.

55. (Cancelled)

56. (Previously Presented) The valve of claim 53 wherein said packing is over molded onto said valve element.

57. (Cancelled)

58. (Previously Presented) The valve of claim 38 wherein said ball has an outer diameter D1 and at least one of said trunnions having an outer diameter D3; wherein said valve

element has a ratio D3/D1 that facilitates assembly of said packing onto said valve element at room temperature.

59. (Previously Presented) The valve of claim 38 wherein said valve cavity comprises a reduced diameter bore that receives said lower trunnion and prevents packing material from creeping below said lower trunnion.

60. (Previously Presented) The valve of claim 38 wherein said packing is live loaded.

61. (Previously Presented) The valve of claim 38 wherein said packing comprises a plastic polymer.

62. (Previously Presented) The valve of claim 61 wherein said polymer comprises PTFE.

63. (Currently Amended) A valve comprising:

a valve body having a valve cavity therein;

a valve element for controlling flow through the valve based on a rotational position of the valve element about an axis, and

a single piece packing that surrounds said valve element; and seals said valve element within said valve cavity;

wherein said valve element comprises a ball and adjacent upper and lower cylindrical trunnions extending from the ball;

a lower end of said single piece packing seals directly against said lower cylindrical trunnion;

said lower cylindrical trunnion extending axially past a lower end of said packing;

said valve cavity being dimensioned to closely receive said valve element while permitting said valve element to axially shift ~~to compensate for temperature effects on said packing.~~

64. (Currently Amended) A valve comprising:

a valve body having a valve cavity therein;

a valve element for controlling flow through the valve based on rotational position of the valve element about an axis, and

a packing that surrounds said valve element and seals said valve element within said valve cavity;

wherein said valve element comprises a ball and adjacent upper and lower cylindrical trunnions extending from the ball;

said lower cylindrical trunnion extending axially past a lower end of said packing;

said valve cavity being dimensioned to closely receive said valve element while permitting said valve element to axially shift in two opposite directions ~~to compensate for temperature effects on said packing.~~

65. (Previously Presented) A valve comprising:

a valve body having a valve cavity therein;

a valve element for controlling flow through the valve based on rotational position of the valve element about an axis, and

a packing that surrounds said valve element and seals directly against said valve element within said valve cavity;

wherein said valve element comprises a ball and adjacent upper and lower;

said lower trunnion extending axially past a lower end of said packing;

load members that apply a load to the packing over a range of temperatures while permitting said valve element to axially shift to compensate for temperature effects on said packing.

66. (Currently Amended) A valve comprising:

a valve body having a valve cavity therein;

a valve element for controlling flow through the valve based on rotational position of the valve element about an axis, and

a single piece packing that surrounds said valve element and seals said valve element within said valve cavity;

wherein said valve element comprises a ball, and adjacent upper and lower cylindrical trunnions extending from said ball, and a stem extending from the upper cylindrical trunnion for rotating said valve element about said axis, said stem having a smaller diameter than said upper trunnion;

said lower trunnion extending axially past a lower end of said packing;

~~wherein said valve element may axially shift in the valve cavity to compensate for temperature effects on said single piece packing.~~

67. (New) The valve of claim 66 wherein said ball is a spherical ball.

68. (New) The valve of claim 66 wherein a material of said packing is polytetrafluoroethylene (PTFE).

69. (New) The valve of claim 66 wherein said packing is dimensioned to be installed on said valve element at a temperature below which said packing deforms.

70. (New) The valve of claim 66 wherein the packing is dimensioned to be installed on said valve element within a temperature range of about 65-100 °F.

71. (New) The valve of claim 66 wherein said packing has a generally cylindrical outer surface defined by a height H and an outer diameter D4, said packing having a ratio H/D4 of about 0.75 to about 0.85.

72. (New) The valve of claim 66 wherein said ball has an outer diameter D1 and at least one of said trunnions having an outer diameter D3; wherein said valve element has a ratio D3/D1 of about 0.7 to about 0.9.

73. (New) The valve of claim 66 wherein said packing is a material selected from the group comprising polytetrafluoroethylene (PTFE), polyethylene, polyetheretherketone (PEEK) and fluorinated ethylene propylene.

74. (New) The valve of claim 66 wherein said packing comprises a polymer that is selected from the group consisting of: PFA, filled PFA, polytetrafluoroethylene (PTFE), filled PTFE, polyethylene, polyetheretherketone (PEEK) and fluorinated ethylene propylene.

75. (New) The valve of claim 66 wherein said packing is live loaded.

76. (New) The valve of claim 66 wherein the valve cavity comprises a reduced diameter counterbore that is sized to form a clearance fit between the lower tunnion and the counterbore that prevents a lower portion of the packing from extruding into the counterbore.

77. (New) The valve of claim 66 wherein said valve element may axially shift in the valve cavity to compensate for temperature effects on said single piece packing.

78. (New) A valve comprising:

a valve body having a valve cavity therein that includes a reduced diameter counterbore;

a valve element for controlling flow through the valve based on rotational position of the valve element about an axis, and

a single piece packing that surrounds said valve element and seals said valve element within said valve cavity;

wherein said valve element comprises a spherical ball, adjacent upper and lower cylindrical trunnions extending from said spherical ball, and a stem extending from the upper cylindrical trunnion for rotating said valve element about said axis, said stem having a smaller diameter than said upper trunnion;

said lower trunnion extending axially past a lower end of said packing into said reduced diameter counterbore, wherein the reduced diameter counterbore is sized to form a clearance fit

between the lower tunnion and the counterbore that prevents a lower portion of the packing from extruding into the counterbore;

wherein said valve element may axially shift in the valve cavity to compensate for temperature effects on said single piece packing.